Aquifer Exemptions in California – Background and Issues

- In March 1983, EPA granted regulatory primacy for a portion of the Underground Injection Control (UIC) Program under the Safe Drinking Water Act (SDWA) to CA's Division of Oil, Gas and Geothermal Resources (DOGGR). DOGGR received the authority to regulate Class II injection wells associated with oil and gas development. The main features of the Class II UIC program include permitting, inspection, enforcement, mechanical integrity testing, plugging and abandonment oversight, data management, and public outreach.

- For the permitting of Class II wells, EPA's UIC regulations require an "aquifer exemption" (AE) for injection of fluids into aquifer formations that would otherwise qualify as an Underground Source of Drinking Water (USDW; i.e., those with quality of 10,000 ppm Total Dissolved Solids [TDS] or less).

- The UIC regulations describe limited criteria for aquifers to be exempted, including those that are oil/gas producing and those with water quality between 3,000 and 10,000 ppm TDS that are not reasonably expected to serve as a drinking water source.

- EPA's 1983 approval of DOGGR's Class II program included approval of numerous aquifer exemptions that the State had requested in their primacy application. However, not all of the aquifers requested by DOGGR for exemption in their application were actually approved (exempted) by EPA.

- EPA approved mostly hydrocarbon producing formations for exemption, along with about 20 non-hydrocarbon producing formations that were in use at the time for oilfield wastewater disposal.

- The primacy approval documents show that along with approving about 20 non-hydrocarbon producing formations, EPA specifically rejected approval of 11 non-HC producing formations that DOGGR requested for exemption. The primacy documents further note that injection into these 11 formations would cease within 18 months.

- Since the granting of primacy, and the original exemption of aquifers by EPA, many of the boundaries of HC-producing formations exempted at the time have changed/expanded; however, DOGGR has never sought approval for changes to these exemption boundaries, even though injection activities have been authorized into these expanded formations.

- Moreover, EPA determined in 2012 that DOGGR has been implementing their Class II injection program with a false understanding of what EPA approved at the time of primacy. Specifically, DOGGR has implemented their Class II injection program believing that the outer boundaries of the approved exemptions for HC-producing formations were the larger administrative field boundaries, whereas the EPA-approved aquifer exemption boundaries were actually the smaller oil/gas pools within the formations.

- With respect to these HC-producing formations, the result is that DOGGR has authorized a large number of injection wells (going back to the time of primacy) into formations that are not exempt – because they are outside the specific oil/gas pools that EPA exempted in 1983.

- Regarding the 11 non-HC producing formations that EPA specifically rejected, DOGGR has also authorized injection into those formations and many of them are fairly high quality (less than 3,000 ppm TDS). The situation with a subset of these 11 formations has been complicated somewhat by a few old letters that DOGGR recently provided to EPA. DOGGR had sent the letters to oil and gas well operators in June 1983 (3 months after EPA granted primacy), and they state that as a result of an appeal by DOGGR, EPA's original decision to deny AEs for certain aquifers had been "overturned" and, therefore, existing injection activity could continue. However, neither EPA, nor DOGGR, have any documentation of the appeals or EPA approval of these AEs.

- Absent any specific documentation of the State's appeal and EPA approval thereof, these formations cannot be deemed exempt. Also, given the very fresh quality of these formations and EPA's prior determination to reject their exemption, it is very unlikely that they are "exemptable" formations.

- In addition to addressing current injection into these 11 formations, EPA needs the State to develop a plan that describes how they propose to remedy other ongoing injection into aquifers that are not presently exempt. The plan should describe their proposed approach for different types of action they will take and the expected timeline for completing these actions.